Beautiful Minds: The Nobel Memorial Prize in Economics

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This is the time of the year when the decisions relating to the Nobel memorial prize in economics are announced. The study lists the earlier recipients and highlights certain interesting facets that could act as a guide for selecting potential recipients

I
Introduction

This is the time of the year when the economic fraternity the world over is abuzz with the news of potential winners of the prestigious prize in Economics, the Nobel Memorial Prize. This will be the 38 th year of award of the prize. This article looks into the history of the Nobel Prize in Economics and hazards a few guesses on the potential winners.

A Swedish chemist and engineer, Alfred Nobel (1833-96) made a fortune from the manufacture of explosives. He left most of the money in trust and according to the terms of the Nobel Will (hereafter, *Will*):

> the capital, invested in safe securities by my executors, shall constitute a fund, the interest on which shall be annually distributed in the form of prizes to those who, during the preceding year, shall have conferred the greatest benefit on mankind (extracted from Nobel Foundation website, hereafter NFW).

The *Will* further reiterated that five prizes would be awarded to the persons who shall have: (a) made the most important discovery or invention within the field of physics; (b) made the most important chemical discovery or improvement; (c) made the most important discovery within the domain of physiology or medicine; (d) produced in the field of literature the most outstanding work in an ideal direction; and (e) done the most or the best work for fraternity between nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses.

The *Will* further remarked:

> The prizes for physics and chemistry shall be awarded by the Swedish Academy of Sciences; that for physiological or medical work by the Caroline Institute in Stockholm;

that for literature by the Academy in Stockholm, and that for champions of peace by a committee of five persons to be elected by the Norwegian Storting (extracted from NFW).

The executors of the *Will* established a private institution, the Nobel Foundation, to manage the bequest and coordinate the work of the various prize-awarding institutions. The five original Nobel Prizes – in Physics, Chemistry, Physiology/Medicine, Literature and Peace – have been awarded annually since 1901.

It was not until 1968 that the *Sveriges Riksbank* (Bank of Sweden), as part of its tercentenary celebrations, instituted a sixth award: the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel. The Economics Prize is, therefore, not technically a Nobel Prize, as it was not part of the *Will*; it is rather a Nobel Memorial Prize funded by the Bank of Sweden. This Prize, popularly known as the Nobel Prize in Economics, is awarded annually by the Royal Swedish Academy of Sciences in line with the basic principles of the original five prizes. According to the statutes 'the Prize shall be awarded annually to the person who has carried out a work in economic science of the eminent significance expressed in the *Will* of Alfred Nobel drawn up on November 27, 1895'.

II
Nomination and selection process

The work of handling nominations is undertaken primarily by the Royal Swedish Academy of Sciences (see NFW for details). The people/institutions who are qualified to nominate for this award include: (a) Swedish and foreign members of the Royal Swedish Academy of Sciences; (b) members of the Prize Committee for the Bank of Sweden prize in economic sciences; (c) prize winners in economic sciences; (d) permanent professors in relevant subject at the universities and colleges in Sweden, Denmark, Finland, Iceland and Norway; (e) holders of corresponding chairs in at least six universities or colleges, selected for the relevant year by the Academy of Sciences with a view to ensuring the appropriate distribution between different countries and their seats of learning; and (f) other scientists from whom the Academy may see fit to

invite proposals. As regards (e) and (f), the decisions as to the selection of the teachers and scientists are taken each year before the end of the month of September (NFW).

The Academy receives over 200 nominations every year. The economics prize selection committee of the Academy (with five members and several adjunct members with same voting rights as the members) commissions expert studies of the most prominent candidates, sometimes by Swedish experts but usually by experts from other countries with international reputation. The prize committee presents its award proposal to the social science class of the Academy in the form of a report, with an extensive survey of the main candidates who are short-listed for the prize. The report advances arguments in support of the proposal, incorporating observations from all the solicited expert studies. On the basis of this material, the class suggests a Laureate (or a shared prize between two or, at most, three Laureates) regularly following the Committee's proposal. Finally, the entire Academy meets to take the final award decision, usually in October. The deliberations and votes of the Academy are kept secret. Table 1 illustrates the process.

Table 1: Process of selection of winners of the Nobel memorial prize in economics

Month	Process
September	Nominations forms sent out by prize committee to around 3000 persons
February	Deadline for submission. The filled-in forms need to reach the Committee not later than January 31 of the following year. Around 250-350 names are submitted
March-May	Consultation with experts. The names of short-listed candidates sent to especially appointed experts for their assessment of the candidate's work
June-August	Writing of the report. The prize committee puts together the report with recommendations to be submitted to the Academy. The report is signed by all members of the Committee
September	Committee submits recommendations. The prize committee submits its report with recommendations on the final candidates to the members of the Academy. The report is discussed at two meetings of the economics section of the Academy
October	Prize Winners are chosen. The Academy of Sciences selects the economics prize winners through a majority vote. The decision is final and without appeal. The names of the prize winners are then announced
December	Prize winners receive their prize. The prize award ceremony takes place on December 10 in Stockholm when the winners receive the economics prize consisting of a medal, diploma, and a document confirming the prize amount

Figures in the second row for September pertain to year t, information for other months pertain to year t+1

The annual presentation of the award, along with the original five prizes, is made at a formal ceremony at Stockholm Concert Hall on December 10, the anniversary of Alfred Nobel's death. At the award ceremony, the recipient receives a diploma, the Nobel medal and the prize amount. Until 1968, in principle, more than three persons could share the Nobel prize, but this never happened in practice. The previous wording of the statutes governing the prize was altered in 1968 to read 'in no case may a prize be divided between more than three persons'.

III
The Nobel memorial prize in economics

Since its inception in 1969, 58 economists have been awarded the prize. Single awards have been made on 21 occasions. Appendix 1 provides the year-wise details. In what follows, we attempt to glean certain interesting facets about the economists who have been recipients of the Nobel memorial prize in economics.

Areas

A useful starting point, following Lindbeck (1985) and subsequently, Lindbeck (NFW) would be to ascertain the areas in which the Nobel prizes have been awarded. However, in view of the 'multidimensional nature of scientific contributions' (Lindbeck, NFW), any adopted classification could prove arbitrary.[2] Based on hindsight, we adopt a more disaggregated classification, in line with courses typically taught at university levels: microeconomics (Stigler, 1972), macroeconomics (Friedman, 1976; Lucas, 1995; Kydland and Prescott, 2004; Phelps, 2006), public economics (Buchanan, 1986), financial economics (Merton and Scholes, 1997), development economics (Schultz and Lewis, 1979), international economics (Ohlin and Meade, 1977), growth economics (Solow, 1987), applied economics (Stone, 1984), macroeconometrics (Klein, 1980), econometrics (Heckman and McFadden, 2000), game theory (Aumann and Schelling, 2005), information economics (Akerlof, Spence and Stiglitz, 2001)[2] and economic history (Fogel and North, 1993). Needless to state, even such a disaggregated classification could be arbitrary, since there is often an overlap between the identified fields and contributions

often span multiple fields. Alternately, certain fields of study could be subsumed within broader categories, substantially downsizing our classification. Keeping these caveats in view, the broad distribution of prizes (with subject areas in alphabetical order) is set out in Table 2.

Table 2: Distribution of Nobel Prizes

Area	No. of recipients	Percent to total	Average age
Applied economics	2	3.4	69
Development economics	2	3.4	70.5
Econometrics	5	8.6	65.4
Economic history	2	3.4	70.0
Financial economics	5	8.6	59.0
Game theory	5	8.6	72.6
Growth economics	2	3.4	66.5
Information economics	5	8.6	63.8
International economics	3	5.2	71.7
Macro-econometrics	3	5.2	66.7
Macroeconomics	9	15.5	69.0
Microeconomics	14	24.1	66.1
Public economics	1	1.7	67.0
Total	57	100	66.5

Clearly, micro and macro economics are at the very top of the ladder, accounting for 23 (around two-fifths) of the economists who have received the prize.

Affiliation

At the time of the award, the laureates were affiliated, with some of the most prestigious universities in the world. Only twelve universities have been associated with more than one award. These include: University of Chicago (9), Harvard University (4), University of Cambridge (4), University of California, Berkeley (4), Columbia University (4), MIT (3), Princeton University (3), Stanford University (3), George Mason University (2), University of Oslo, Norway (2), Carnegie Mellon University (2) and Yale University (2). An important point of note is, at the time of the award, 43 of the 58 (or 74%) Nobel recipients were affiliated to US universities, highlighting the leading role of US in pioneering economic research since its inception.

Doctorates

Another important point of note is that the Nobel laureates have been trained in some of the highly reputed universities in the world. Of the 58 recipients, 44 received their doctorates from 14 universities. These 14 universities which have imparted doctoral training to two or more laureates (names and earliest year of doctorate in that order) include: University of Chicago (Stigler, 1938; Simon, 1943; Buchanan, 1948; Markowitz, 1954; Aumann, 1955; Becker, 1955; Lucas, 1964; Scholes, 1969), Harvard University (Samuelson, 1941; Tobin, 1947; Schelling, 1951; Solow, 1951; Spence, 1972; Smith, 1955), MIT (Klein, 1944; Mundell, 1956; Akerlof, 1966; Stiglitz, 1966; Merton, 1970); Columbia University (Kuznets, 1926; Friedman, 1946; Vickery, 1948; Arrow, 1951), Johns Hopkins University (Miller, 1952; Fogel, 1963), Princeton University (Nash, 1950; Heckman, 1971); University of California, Berkeley (North, 1952; Kahnemann, 1961); Carnegie Mellon University (Prescott, 1967; Kydland, 1973); University of Cambridge (Sen, 1959; Mirrlees, 1963), University of Leiden, Netherlands (Tinbergen, 1929; Koopmans, 1936), University of London (Lewis, 1942; Coase, 1951), University of Oslo (Frisch, 1926; Haavelmo, 1946), University of Paris (Allais, 1949; Debreu, 1956) and University of Stockholm (Ohlin, 1924; Mydral, 1927).

Single vs. joint winners

Joint awards have been made on 17 occasions. In the case of joint awards, the prize has been shared between two economists on 14 occasions and between three economists in three (1990, 1994 and 2001) instances. In fact, in the first year itself, the Nobel memorial prize was shared between two economists. Over the past six years (i.e., from 2000 onwards), joint prizes have been awarded on all occasions.

Theory v. policy

In its citation, the award typically cites the contribution of the recipient in the concerned area of economics. While it is often difficult to make a watertight demarcation between theory and policy, in only five instances, the word 'policy' (the winner and year

of prize in that order) explicitly figures in the prize citation (Friedman, 1976; Klein, 1980; Lucas, 1995; Mundell, 1999 and Phelps, 2006). All of them were single prize winners in those years. On the other hand, the word 'theory' was explicitly mentioned on as many as 20 instances (including 10 instances when there were multiple awardees), presumably hinting at the dominance of theoretical research. Only in one instance (Friedman, 1976), the words 'theory' and 'policy' both find place in the prize citation.

Prize citation

The prize citation underscores the pioneering contribution of the winner in the concerned area. The longest citation (26 words) were in 1971 (Kuznets) and 1974 (Mydral and Hayek), followed closely by Samuelson (1970; 25 words); the shortest citation (6 words) was for A. Sen, who received the Nobel Memorial prize in 1998; the average number of words per citation was 15.1. In 11 instances, the number of words in citation has been equal to or exceeded 20. Typically, in the case of joint winners, there is a uniform citation highlighting the contribution of the winners in the concerned area. In two instance (i.e., 2000 and 2003), the joint citation was different for each winner (both pertained to the broad area of econometrics).

Criteria for Awards

When considering a worthy contribution, as Lindbeck (NFW) has observed, the selection committee looks, in particular, at the *originality* of the contribution, its scientific and practical *importance*, and its *impact* on scientific work (italics in original). To some extent, the Committee also takes cognizance of its impact on society at large, including its impact on public policy (Lindbeck, NFW). Thus, new results may turn out to be relevant only to a transient conjuncture of circumstances, having much less generality than was supposed at first.

Does age matter?

Following from the earlier point, unlike other Nobel prizes, in economics, recipients receive the prize after sufficient time has elapsed since their contribution in

the concerned area. This is reflected in the fact that the average age of Nobel recipients is 66.5 years (median age of 66 years); the youngest Nobel winner was Arrow (1972; 51 years)[3] and the oldest till date has been Schelling (2005; 84 years).[4] Apart from Arrow, the other laureates who were 60 years or younger include Merton (53 years), Samuelson (55 years), Heckman, Scholes and Sharpe (56 years), Lucas, Spence and Stiglitz (58 years) and Klein and Mirrlees (60 years).

Across disciplines, the youngest winners, on average, at in financial economies (average age of 59 years) whereas the oldest winners are in game theory with average age of 72.6 years (Table 1). Usually, it takes a longer time in a theoretical area like game theory to ascertain if a new contribution is *solid* or if it is just a fad. On the other hand, the applicability of ideas in financial economics is much more widespread, it presumably takes relatively less time to identify the significance of an idea.

Content of awarded contributions

The increased role of mathematical formulation has been strongly reflected in the awards, important examples being the prizes to Samuelson, Hicks, Arrow, Koopmans, Kantorovich, Debreu, Allais as well as the laureates in financial economics and game theory.

Another important emerging trend has been the growing importance of quantitative methods including systematic statistical testing or estimation. This development is reflected in the awards to several economists early in the history of the Nobel prize Frisch, Tinbergen, Leontief, Klein, Stone (upto mid 1980s) and subsequently, Heckman, McFadden, Engle and Granger (post 1999), to name a few.

The awards also illustrate the important role of macroeconomics during the post-war period. The prizes to Friedman, Klein, Tobin, Modigliani, Solow, Lucas, Kydland and Prescott as also Phelps are testimony to this fact. Innovative ways of looking at the economic systems have also been recognized, as reflected in the awards in the areas of information economics, human capital and game theory as well as the role of economic institutions.

John Bates and Nobel

Important indicators of potential Nobel winners include high citation counts (Quandt, 1976) and prior award of prestigious honors. In the latter case, a number of recipients of John Bates Clark Medal have subsequently been awarded the Nobel prize in economics. The Medal (named after the American economist, John Bates Clark 1847-1938) was instituted in 1947 by the American Economic Association and is awarded every two years to an *American* economist under the age of forty who is adjudged to have made 'a significant contribution to economic thought and knowledge'. To date, 29 economists have been awarded the Medal (no Medal was awarded in 1953) and eleven of them are subsequent winners of the Nobel memorial prize. These include (with year of Medal and Nobel memorial prize, respectively, in that order): Samuelson (1947, 1970); Friedman (1951, 1976); Tobin (1955, 1981); Arrow (1957, 1972); Klein (1959, 1980); Solow (1961, 1987); Becker (1967, 1992); McFadden (1975, 2000); Stiglitz (1979, 2001); Spence (1981, 2001) and Heckman (1983, 2000). The shortest time gap between the two awards was for Arrow (15 years) and the longest (26 years) was in case of Tobin (1981) and Solow (1987).

It seems that there is an average time lag of roughly 22 years between receipts of the two awards. It is, therefore, interesting to see which other Medal winners since the mid 1970s (Feldstein, 1977; Hausman, 1985; Grossman, 1987; Kreps, 1989; Krugman, 1991; Summers, 1993; Card, 1995; Murphy, 1997; Shleifer, 1999, Rabin, 2001; Levitt, 2003 and Acemoglu, 2005) go on to win the Nobel prize.

IV
Controversies

Three main criticisms have often been labeled of the Nobel memorial prize. First, concerns have been voiced that the Chicago School has been the most favored. Nine economists (Friedman, Schultz, Stigler, Miller, Coase, Becker, Fogel, Lucas and Heckman) were faculty members of the University of Chicago and a further four (Simon, Buchanan, Markovitz and Scholes) received their doctoral training from this University,

although in case of the latter, at the time of receiving the award, they were affiliated to other universities. All in all, 13 out of 57 (roughly around one-fourth) of the economists were, directly or indirectly, attached to the University of Chicago, highlighting the important role of this university in the institutional pecking order.

Second, it is often felt that in the first two decades since its inception, the Academy needed to clear the 'backlog' of specific achievements, many of whom made their seminal contributions in the decade of the 1940s and 1950s (or even earlier). This is echoed in Lindbeck (NFW) who remarked: 'during the first decade of the Economics Prize, the Committee largely had the task of working with a *heavy backlog of rather obvious candidates*' (emphasis added). However, even this backlog could not be fully eliminated in several instances, either because they expired before the award was instituted (Keynes, 1883-1946) or before the debt to them could possibly be honored (Joan Robinson, 1903-1983), since, post 1974, the statutes of the Nobel Foundation stipulated that the award cannot be given posthumously (see, for instance, Snowdon and Vane, 1999).

Third, concerns have also been expressed that given the prestige involved in the prize and the status it affords the affiliated universities, it often leads to a competitive race. Franco Modigliani, the 1985 Laureate, remarked 'Nobel Prize winners are to the scientific establishment what cardinals are to the church. They are figures who command reverence and benevolence' (quoted in Snowdon and Vane, 1999).[5]

V
Observations

In conclusion, what does one take away from the analysis? Without delving into intricacies, we merely highlight the salient observations. First, it seems that being affiliated to a US university is an important determinant (roughly three-fourths of laureates). Second, being an affiliate of the group of 12 universities with a track record of employing laureates (11 of these are in the US). Third, have doctoral training in one of the 14 select universities with a distinguished track record (8 out of these are in the US). Fourth, being a winner of the John Bates Clark Medal is an important indicator (roughly

a fifth of the laureates). Interestingly, only four (Hicks, Hayek, Kantorovich and Selten) Laureates do not satisfy any of the aforesaid criteria.

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Appendix 1: The Nobel memorial prize in economics – 1969-2006

Year	Laureate (s)/ Year of birth	Citizenship	Doctoral degree (Univ.)	Affiliation at time of award	Broad area of study	Prize citation
1969	R Frisch (1895)	Norway	Univ.of Oslo	Univ.of Oslo	Macroeconometrics	for having developed and applied dynamic models for the analysis of economic processes
	J Tinbergen (1903)	Netherland	Univ.of Leiden	Netherlands School of Economics		
1970	P A Samuelson (1915)	USA	Harvard Univ.	MIT	Microeconomics	for the scientific work through which he demonstrated static and dynamic economic theory and actively contributed to raising the level of analysis in economic science
1971	S Kuznets (1901)	USA	Columbia Univ.	Harvard Univ.	Economic growth	for his empirically founded interpretation of economic growth which has led to new and deepened insights into the economic and social structure and process of development
1972	J R Hicks (1904)	UK	BA (Univ.of Oxford)	Univ. of Oxford	Microeconomics	for their pioneering contributions to general economic equilibrium theory and welfare theory
	K J Arrow (1921)	USA	Columbia Univ.	Harvard Univ.		
1973	W Leontief (1906)	USA	Univ. of Berlin	Harvard Univ.	Applied economics	for the development of the input-output method and its application to important economic problems
1974	G Mydral (1898)	Sweden	Univ. of Stockholm	Univ. of Stockholm	Macroeconomics	for their pioneering work in the theory of money and economic fluctuations and for their penetrating analysis of the interdependence of economic, social and institutional phenomena
	F Von Hayek (1899)	Austria	Univ. of Vienna	Univ. of Freiburg		
1975	L V Kantorovich (1912)	Russia	Leningrad State Univ.	Academy of Sciences, Moscow	Microeconomics	for their contribution to the theory of optimum allocation of resources
	T C Koopmans (1910)	US	Univ. of Leiden	Yale Univ.		
1976	M Friedman (1912)	US	Columbia Univ.	Univ. of Chicago	Monetary economics	for his achievements in the fields of consumption analysis, monetary history and theory and for his demonstration of the complexity of stabilisation policy
1977	B Ohlin (1899)	Sweden	Univ. of Stockholm	Stockholm School of Economics	International economics	for their path-breaking contribution to the theory of international trade and international capital movements
	J E Meade (1907)	UK	Univ. of Oxford	Univ. of Cambridge		
1978	H A Simon (1916)	USA	Univ. of Chicago	Carnegie Mellon Univ.	Microeconomics	for his pioneering research into the decision-making process within economic organisations
1979	T W Schultz (1902)	USA	Univ. of Wisconsin	Univ. of Chicago	Development economics	for their pioneering research into economic development research with particular consideration of the problems of developing countries
	W A Lewis (1915)	UK	Univ. of London	Princeton Univ.		
1980	L R Klein (1920)	USA	MIT	Univ. of Pennsylvania	Macroeconometrics	for the creation of econometric models and the application to the

						analysis of economic fluctuations and economic policy
1981	J Tobin (1918)	USA	Harvard Univ.	Yale Univ.	Macroeconomics	for his analysis of financial markets and their relations to expenditure decisions, employment, production and prices
1982	G J Stigler (1911)	USA	Univ. of Chicago	Univ. of Chicago	Microeconomics	for his seminal studies of industrial structures, functioning of markets and causes and effects of public regulation
1983	G Debreu (1921)	USA	Univ.of Paris	Univ. of California, Berkeley	Microeconomics	for having incorporated new analytical methods into economic theory and for his rigorous reformulation of the theory of general equilibrium
1984	R Stone (1913)	UK	Univ.of Cambridge	Univ. of Cambridge	Applied economics	for having made fundamental contributions to the development of systems of national accounts and hence greatly improved the basis for empirical economic analysis
1985	F Modigliani (1918)	USA	New School of Social Research, USA	MIT	Macroeconomics	for his pioneering analysis of saving and financial markets
1986	J M Buchanan (1919)	USA	Univ. of Chicago	George Mason Univ.	Public economics	for his development of contractual and constitutional bases for the theory of economic and political decision-making
1987	R M Solow (1924)	USA	Harvard Univ.	MIT	Growth economics	for his contributions to the theory of economic growth
1988	M Allais (1911)	France	Univ. of Paris	Ecole Nationale Superiure des Mines, France	Microeconomics	for his pioneering contributions to the theory of markets and efficient utilisation of resources
1989	T Haavelmo (1911)	Norway	Univ. of Oslo	Univ. of Oslo	Econometrics	for his clarification of the probability theory foundations of econometrics and his analyses of simultaneous economic structures
1990	H M Markovitz (1927)	USA	Univ. of Chicago	City Univ. of New York	Financial economics	for their pioneering work in the theory of financial economics
	M H Miller (1923)	USA	Johns Hopkins Univ.	Univ.of Chicago		
	W F Sharpe (1934)	USA	Univ. of California, Los Angeles	Stanford Univ.		
1991	R H Coase (1910)	UK	Univ. of London	Univ. of Chicago	Microeconomics	for his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy
1992	G S Becker (1930)	USA	Univ. of Chicago	Univ. of Chicago	Microeconomics	for having extended the domain of microeconomic analysis to a wide range of human behavior and interaction, including non-market behavior
1993	R W Fogel (1926)	USA	Johns Hopkins Univ.	Univ. of Chicago	Economic history	for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change
	D C North (1920)	USA	Univ. of California, Berkeley	Washington Univ, St.Louis		
1994	J C Harsanyi (1920)	USA	Univ. of Budapest	Univ. of California, Berkeley	Game theory	for their pioneering analysis of equilibria in the theory of non-cooperative games
	J F Nash (1928)	USA	Princeton Univ.	Princeton Univ.		
	R Selten (1930)	Germany	Univ. of Frankfurt	Rheinische Friedrich-		

				Wilhelms Universitat, Bonn		
1995	R E Lucas (1937)	USA	Univ. of Chicago	Univ. of Chicago	Macroeconomics	for having developed and applied the hypothesis of rational expectations, and thereby transformed macroeconomic analysis and deepened our understanding of economic policy
1996	J A Mirrlees (1936)	UK	Univ. of Cambridge	Univ. of Cambridge	Information economics	for their fundamental contributions to the economic theory of incentives under asymmetric information
	W Vickery (1914)	USA	Columbia Univ.	Columbia Univ.		
1997	R C Merton (1944)	USA	MIT	Harvard Univ.	Financial economics	for a new method to determine the value of derivatives
	M S Scholes (1941)	USA	Univ. of Chicago	Stanford Univ.		
1998	A Sen (1933)	India	Univ. of Cambridge	Univ. of Cambridge	Microeconomics	for his contributions to welfare economics
1999	R A Mundell (1932)	Canada	MIT	Columbia Univ.	International economics	for his analysis of monetary and fiscal policy under different exchange rate regimes and his analysis of optimum currency areas
2000	J J Heckman (1944)	USA	Princeton Univ.	Univ. of Chicago	Econometrics	for his development of theory and methods of analyzing selective samples
	D L McFadden (1937)	USA	Univ. of Minnesota	Univ. of California, Berkeley		for his development of theory and methods of analyzing discrete choice
2001	G A Akerlof (1940)	USA	MIT	Univ. of California, Berkeley	Information economics	for their analyses of markets with asymmetric information
	A M Spence (1943)	USA	Harvard Univ.	Stanford Univ.		
	J E Stiglitz (1943)	USA	Columbia Univ.	Columbia Univ.		
2002	D Kahneman (1934)	USA/Israel	Univ. of California, Berkeley	Princeton Univ.	Microeconomics	for having integrated insights from phychological research into economic science, especially concerning human judgement and decision-making under uncertainty
	V L Smith (1927)	USA	Harvard Univ.	George Mason Univ.		
2003	R F Engle (1942)	USA	Cornell Univ.	New York Univ	Econometrics	for methods of analyzing economic time series with time varying volatility (ARCH)
	C W J Granger (1934)	UK	Univ. of Nottingham	Univ. of California, San Diego		for methods of analyzing economic time series with common trends (cointegration)
2004	F E Kydland (1943)	Norway	Carnegie Mellon Univ.	Carnegie Mellon Univ./Univ. of California, Santa Barbara	Macroeconomics	for their contributions to dynamic macroeconomics: the time consistency of economic policy and the driving forces behind business cycles
	E C Prescott (1940)	USA	Carnegie Mellon Univ.	Arizona State Univ./Fed. Reserve Bk of Minneapolis		
2005	R J Aumann (1930)	Israel/USA	MIT	Centre for Rationality, Hebrew Univ. of Jerusalem	Game theory	for having enhanced our understanding of conflict and cooperation through game theory analysis
	T C Schelling (1921)	USA	Harvard Univ.	Univ. of Maryland, College Park		for his analysis of intertemporal tradeoffs in macroeconomic policy
2006	E Phelps (1933)	USA	Yale Univ	Columbia Univ	Macro economics	

Notes

The views expressed are strictly personal.

1. Lindbeck (1985), Chairman of the Economics prize committee for over a decade till mid-1990s, employed a five-fold classification (basic economic theory, theoretical contributions concerning specific sectors, new methods of economic analysis, pure empirical research and non-formalized innovative thinking). Subsequently, Lindbeck (NFW) adopts a more generic classification (general equilibrium, macroeconomics, microeconomics, interdisciplinary research and new methods of economic analysis).

2. Incidentally, the maximum number of awards was also in 2001, when 15 personalities (3 each in Chemistry, Economics, Medicine and Physics), 2 in Peace and 1 in Literature were awarded Nobel prizes.

3. Compare this. In Physics, the youngest Nobel prize winner has been 25 years, in Chemistry 35 years, in Medicine/Physiology 32 years, in Literature 42 years and in Peace 32 years. Incidentally, there are five winners (2 each in Physics and Medicine and 1 in Peace) who received the Nobel prize at the age of 87, the oldest till date.

4. The list includes one more octogenarian, R Coase, who received the Nobel prize at 81 years. It may also be stated in this context that Schelling retired in 2003 as Professor at University of Maryland and was planning to learn a computer to finish research on racial segregation he had started long back. After the Nobel prize, the University of Maryland has un-retired him to raise funds (Harford, 2005).

5. Interestingly, the American Economic Association (AEA) instituted the Francis A Walker Medal in 1947, named after the First President of AEA (1886-92), awarded every five years 'to the living American economist who in the judgement of the awarding body has during his career made the greatest contribution to economics '. It was discontinued in 1981 after the Nobel made it superfluous. Finally, in the 1960s, the AEA instituted the Richard T. Ely Lecture, named after Richard T Ely, the first Secretary of AEA and erstwhile President (1900-01), under which renowned economists give their Address at the yearly AEA Conference.

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